Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility

STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: 29th September 2009 Screener: Lev Neretin

Panel member validation by: N.H. Ravindranath

I. PIF Information

GEF PROJECT ID: 3796
COUNTRY(IES): Niger
PROJECT TITLE: Integration of Greenhouse Gas emission reductions in Niger's Rural Energy Service Access program
GEF AGENCY(IES): UNDP
OTHER EXECUTING PARTNER(S): Ministry of Mines & Energy
GEF FOCAL AREA (S): Climate Change
GEF-4 STRATEGIC PROGRAM(S): CC-SP3-RE, CC-SP4-Biomass,
NAME OF PARENT PROGRAM/UMBRELLA PROJECT : GEF Programmatic Approach on Access to Energy in West Africa

II. STAP Advisory Response *(see table below for explanation)*

1. Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies): **Minor revision required**

III. Further guidance from STAP

This is a good example of an integrated Rural Energy Access project, providing local and global benefits. This is an ambitious project that covers the first phase of the Niger's Rural Energy Service Access Program (PRASE) targeting 20 rural communities. Project proposes introduction of Energy Service Operators (ESOs) through a decentralized public-private partnership. Though, no details are provided in the PIF, STAP understands that ESOs are similar to better known ESCOs institutions and will be responsible for the delivery of energy efficient services in the project. In the past, GEF gained substantial experience in strengthening markets for ESCOs in developing countries, particularly in Eastern European countries. This experience clearly demonstrated that GEF funds were rarely sufficient to launch ESCO industries from "scratch". The existence of favorable economic conditions (tariffs, regulations, access to capital and maturity of financial institutions and etc.) and national technical capacity were among key factors for success (Climate Change Program Study, 2004). Cost-effective and successful functioning of PPPs also depends on the market maturity and public capacity for monitoring and enforcing contracts.

STAP advises that it requires minor revision of the direction that the present PIF describes, and specifically recommends that a comprehensive barrier and cost-benefit analysis at the project preparation phase be conducted in order to find appropriate implementation modality for implementing this project.

Financial viability is critical for the functioning of ESOs as well as for replication of the concept in other regions.

Project will support a wide range of EE and renewable technologies (EE lighting, EE pumps, solar water heating, energy from biomass. EE cooking stoves and etc.). The selection of these technologies should be justified using scientific criteria such as mitigation potential, cost-effectiveness, multiple barriers. Long-term sustainability of these technologies will depend, inter alia, on the availability of capital. Project does little to support financial institutions to provide financing for EE and renewable energy projects.

Overall, STAP strongly recommends promoting a gradual approach to market support for EE and RE in Niger staring from assessments, policy and institutional reforms addressing major barriers to feasibility studies and actual investments as a result of systemic analysis and prior planning. STAP would suggest the following approach for the project locations.

- Identify energy services needed; cooking, lighting, pumping, process heat etc.

- Identify the local renewable energy resources; woody biomass, crop residue, animal dung, solar energy, micro-hydro and wind power.
- Identify the technological options; biogas, decentralized biomass power, efficient cook-stoves, SPVs, solar water heaters etc.
- Assess the investment and operation and maintenance cost for each technological option.
- Select the least cost technology mix (e.g., SPV versus biomass gasifier for power generation)
- Develop institutional arrangements, especially for financial management of the project focused on collecting fee for the energy service provided.

STAP advisory response	*Brief explanation of advisory response and action proposed*
1. Consent	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the concept emphasising any issues that could be improved and the proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.
2. Minor revision required.	STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include: (i) Opening a dialogue between STAP and the proponent to clarify issues (ii) Setting a review point during early stage project development and agreeing terms of reference for an independent expert to be appointed to conduct this review The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.
3. Major revision required	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.